

Title (en)  
Mechanical pencil.

Title (de)  
Füllminenstift.

Title (fr)  
Porte-mine.

Publication  
**EP 0210350 A1 19870204 (EN)**

Application  
**EP 86105945 A 19860430**

Priority  
JP 15702385 A 19850718

Abstract (en)  
[origin: US4729684A] Mechanical pencil in which a chuck assembly for gripping a lead is formed with plural chuck elements mutually combined with each other. The chuck assembly has an internal longitudinal hole to insert a lead through and a lead gripping portion to grip the lead, while a lead guide tube is movably inserted within the lead inserting hole. The lead guide tube pushes on acting portions of the chuck to open the gripping portions of the chuck elements in the direction of parting them from each other when the lead guide tube is advanced, and the lead gripping portion opens to release the lead. The chuck is designed to enable releasing and gripping the lead securely so that it can be suitably used as a chuck mechanism for extending the lead automatically.

IPC 1-7  
**B43K 21/22**

IPC 8 full level  
**B43K 21/027** (2006.01); **B43K 21/033** (2006.01); **B43K 21/22** (2006.01)

CPC (source: EP KR US)  
**B43K 21/027** (2013.01 - EP US); **B43K 21/22** (2013.01 - EP KR US)

Citation (search report)

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- [X] DE 501673 C 19300710 - PIERRE BARBERON
- [A] EP 0146128 A2 19850626 - MICRO CO LTD [JP]
- [A] DE 3336959 A1 19850418 - PENTEL KK [JP]

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US5509743A; EP0287237A1; DE3906346A1

Designated contracting state (EPC)  
CH DE FR GB IT LI

DOCDB simple family (publication)  
**EP 0210350 A1 19870204**; **EP 0210350 B1 19900131**; DE 3668582 D1 19900308; JP H0549478 B2 19930726; JP S6218296 A 19870127; KR 870001049 A 19870311; KR 890001644 B1 19890512; US 4729684 A 19880308

DOCDB simple family (application)  
**EP 86105945 A 19860430**; DE 3668582 T 19860430; JP 15702385 A 19850718; KR 860002827 A 19860414; US 86067186 A 19860507